osteolytic or osteosclerotic bone lesions were detectable. HHV-8 DNA was no longer detectable in marrow or blood. The patient received 4 cycles of idarubicine/dexamethasone. The response to this treatment was minimal and an ASCT was planned. After mobilisation chemotherapy with iphosphamide, epirubicine and etoposide, 29.65 x 10^6 CD34-positive progenitor cells/kg could be harvested with one leukapheresis. ASCT was performed after high dose therapy with melphalan 200 mg/m^2. Reinfusion of 14.83 × 10^6 CD34-positive progenitor cells/kg and medication with G-CSF resulted in engraftment on day +9. Restaging 5 weeks later showed an excellent response. Bone marrow plasma cell infiltration was no longer detectable and hypercellularity of megakaryopoesis was markedly reduced. The platelet counts had returned to normal and the pleural effusions had vanished. IgG and serum electrophoresis were normal while the immunofixation remained positive for IgG lamda. The polyneuropathy of the patient is continuously improving. In conclusion, this case may represent an evolution from possibly HHV-8 related POEMS syndrome to multiple myeloma. Despite lack of response to standard chemo- and immunotherapy ASCT seems to be a useful therapeutic option in patients with signs of POEMS syndrome.

189

RNA-LOADING OF CMRF-56 POSITIVE BLOOD DENDRITIC CELLS IS A PROMISING STRATEGY FOR MULTIPLE MYELOMA IMMUNOTHERAPY

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Immunologic responses to the malignant plasma cells of multiple myeloma (MM) patients are beinginvestigated for their ability to prevent disease relapse after autologous and allogeneic haematopoietic stem cell transplantation. Dendritic cells (DC) are specialized leukocytes that have the capacity to prime and direct an immune response against tumour-associated antigens (TAA). We have used new Trucount® technology to evaluate the whole blood DC subset composition of healthy donors and MM patients. MM donors have similar numbers of CD11c+ CD16+ and CD11c+CD16-blood DC subsets but about half the number of CD11c-CD123+ blood DC compared to normal donors. A CMRF-56 monoclonal antibody-based immunomagnetic selection procedure was used to enrich blood DC for functional studies from the peripheral blood mononuclear cells of healthy donors and MM patients. CMRF-56+ blood DC from MM patients are efficiently activated *ex vivo* and induce autologous and allogeneic mixed lymphocyte responses. The CMRF-56+ blood DC preparation is able to present MHC class I -restricted peptide antigens and has been used to generate cytotoxic T lymphocytes (CTL) against MM -related TAA, hTERT and MUC1. We have optimised the loading of CMRF -56+ blood DC preparations with antigen-encoding mRNA and have shown that enhanced green fluorescent protein mRNA is rapidly transl ated after electroporation into blood DC. In addition, influenza matrix protein (FMP) mRNA -loaded blood DC can process and present antigen to FMP-specific CTL clones and prime FMP-specific CTL responses in whole PBMC populations. We are currently in the process of generating responses against total RNA extracted from MM cell lines prior to initiating a clinical trial of RNA-loaded CMRF-56+ blood DC in patients.

190

FREELITE™; A NEW LABORATORY TOOL TO AIDE IN MONITORING MULTIPLE MYELOMA AFTER TREATMENT

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Background: Multiple Myeloma (MM) is a diagnosis based on multiple parameters. Immunoglobulin levels, radiography, and bone marrow morphology are all evaluated for diagnosis and disease monitoring. Each test examines a different aspect of the disease. Conflicting values between these can obscure the disease picture. In addition, there are several subsets of MM depending on the immunoglobulin secreted. However, one thing is common to all but 5% of MM patients; an excess of free light chains is produced. A new laboratory test, Freelite™, easily and accurately measures free light chains in the serum. **Methods:** One hundred fifty patients with MM who had undergone treatment, some including bone marrow transplant, were prospectively examined. Fifty were patients treated for free light chain MM. Seventy-two were patients treated for IgG MM and 28 were patients treated for IgA secreting MM. The current serum free light chains were examined using Freelite™ and then correlated to the disease state as identified by consensus of bone marrow biopsy, flow cytometry and electrophoresis. **Results:** Thirty-seven of the 50 patients treated for free light chain MM currently had disease. All 37 had markedly elevated serum free light chain levels. The 13 remaining patients were diagnosed "negative" or "atypical" and 8 of these had elevated serum free light chain levels. Forty-six of 100 patients treated for IgG or IgA MM currently had disease. All 46 of these had elevated serum free light chain levels. Fifty-four were diagnosed "negative" or "atypical" and 30 had elevated serum free light chain levels. **Discussion:** In this broad analysis of the most common subtypes of MM, Freelite™ is 100% sensitive when correlated to MM diagnosed by our standard methods. The issue then becomes the decreased specificity (43%) due to false positives that are seen in every subset. This may well be detection of recurrent or residual disease not seen by our standard methods. Only close follow-up will determine if these "false positive" patients recur before the "true negative" patients. This sensitive and quick serum analysis may prove to be an excellent tool for monitoring MM patients after treatment.

191

AUTOLOGOUS VERSUS ALLOGENEIC STEM CELL TRANSPLANT FOR MULTIPLE MYELOMA

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We report results of a comparative analysis of 87 patients with multiple myeloma, treated with either autologous PBSCT (n = 70) or allogeneic sibling donor myeloablative transplant (n = 17) using cyclophosphamide and fractionated TBI conditioning. Autologous transplant recipients were significantly older (median age 53 vs. 47 years, $p < .01$) and had a longer period between diagnosis and transplant (10.5 vs 7 months, $p = .03$). Autologous transplant led to lower transplant related mortality (TRM) of 4% (95% CI 0-36%) vs. 18% (0-9%) in the allogeneic patients at 100 days post transplant ($p = .02$). More frequent complete responses (CR) were seen in the allogeneic patients (64% (95% CI 37-91%) vs. 34% (95% CI 23-45%) in the autologous patients, $p = .09$). In the autologous patients, overall survival of 86% (95% CI 80-95%) at one year and 50% (95% CI 47-75%) at 4 years was seen vs. 64% (95% CI 40-87%) at one year and at 4 years in the allogeneic patients. In patients surviving beyond one year, survival was superior in the allogeneic transplant patients (100% (95% CI 100-100%) versus 58% (95% CI 41-75%) at 4 years, $p = .02$). The cumulative incidence of relapse showed a trend towards higher relapse in the autologous patients (73% (95% CI 55-90%) versus (37% (95% CI 11-63%) in allogeneic patients at 4 years, $p = .1$). In multiple regression analysis, attainment of a CR or PR pre transplant (OR 3.4, 95% CI 0.9-12.9, $p = .06$), ≤ 1 year between diagnosis and transplant (OR 3.8, 95% CI 1.1-13.8, $p = .04$), ≤ 2 regimens of chemotherapy (OR 8.3, 95% CI 2.2-31.3, $p < .01$) were associated with good response. Early transplant with ≤ 4 chemo cycles (RR of failure 0.5 (95% CI 0.2-0.9, $p = 0.04$) and attainment of CR or PR post transplant (RR 0.4 (95% CI 0.2-0.7, $p < 0.01$) was a significant predictor of good overall and progression free survival. Older age at transplant (RR 1.1, 95% CI 0.9-1.3, $p = .06$), allogeneic transplant (RR 11.0, 95% CI 2.3-53.7, $p < .01$), and > 4 cycles of pretransplant chemotherapy (RR 6.3, 95% CI 1.1-35.7, $p = .04$) were each significant predictors of high TRM. We observed good clinical tolerance of the myeloablative conditioning regimen fol-